FOLDABLE MOBILE TERMINAL DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a mobile terminal device in which first and second housings are foldably coupled to each other through a hinge portion, and particularly to a mobile terminal device having plural image pick-up sections.

2. Description of the Related Art

A mobile terminal device has been proposed, in which an upper housing and a lower housing are coupled by a hinge portion foldably and further the upper housing can turn in relation to the lower housing in a direction orthogonal to the above unfolding/folding direction.

In this mobile terminal device, a camera and a display are mounted on one surface of the upper housing, and a camera is mounted also at one end of the hinge portion. Further, the display is used in order to display a picture from the operating camera.

The thus constructed mobile terminal device can be used as a video camera with a monitor, in a state where the upper housing and the lower housing unfold at an angle of about 90° and further the upper housing is turned at an angle of 90° to the lower housing.

Further, the above mobile terminal device can control starting of each of functions thereof according to the unfolding/folding position between the upper and lower housings, or the rotary position between the upper and lower housings. For example, as described above, in case that the upper housing and the lower housing are unfolded at an angle of 90°, and further the upper housing is turned at an angle of 90°, a video camera mode starts automatically (refer to, for example, Patent Literature 1).

[Patent Literature 1]

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In the above conventional mobile terminal device, it is possible to start each function according to the positional relation between the upper housing and the lower housing. However, after the video camera mode was started, the operation for setting which of two cameras is used for shooting images must be performed by a user himself. Namely, though the digital camera mode can be started automatically by a simple operation, the operation control of the camera itself can be not performed automatically.

SUMMARY OF THE INVENTION

In view of the above circumstances, an object of the invention is to provide a mobile terminal device provided with plural image pick-up sections, wherein an operation of each image pick-up section can be controlled by a simple operation.

A mobile terminal device of the present invention includes first and second housings formed nearly in the shape of a rectangular parallelepiped and foldably coupled to each other by a hinge portion. And, in relation to the second housing, the first housing can turn in the direction orthogonal to the unfolding/folding direction. The mobile terminal device further comprises a first image pick-up section and a second image pick up section. The first image pick-up section is provided for a surface orthogonal to the unfolding/folding direction of the first housing. The second image pick-up section is provided for a surface on the opposite side to the surface having the first image pick-up section, in a state where the first and second housings open so that they form an angle of about 90° and the other housing turns at an angle of about 90° to the one housing. The mobile terminal device further comprises a position detecting section for detecting a positional relation between the first and second housings by a change of the angle between the first and second housings. Further, herein, when the position detecting section detects, in a state where the first and second housings are unfolded and the first image pick-up section is operating, that the first and second housings are changing in a direction where they are folded, the operation of the first image pick-up section is stopped.

By this constitution, when the first and second housings are folded in the state where the first image pick-up section is operating, the operation of the first image pick-up section is stopped. Accordingly, it is not necessary to perform the stopping operation of the first image pick-up section by a key operation. Therefore, the operation of the first image pick-up section can be controlled by a simple operation.

Further, in the mobile terminal device of the present invention, when the position detecting section detects that the first and second housings are changing in a direction where they are unfolded or in a direction where they are folded, in a state where the first and second housings are unfolded at an angle of about 90°, the other housing is turned at an angle of about 90° to the one housing, and the second image pick-up section is operating, the operation of the second image pick-up section is stopped.

By this constitution, when unfolding and folding of the first and second housings are performed in the state where the second image pick-up section is operating, the operation of the second image pick-up section is stopped. Accordingly, it is not necessary to perform the stopping operation of the second image pick-up section by a key operation. Therefore, the operation of the second image pick-up section can be controlled by a simple operation.

Further, in the mobile terminal device of the invention, when the position detecting section detects, in a state where the first and second housings are unfolded and the first image pick-up section is operating, that the angle formed by the first and second housings changes to about 90°, the operation of the first image pick-up section is stopped, and the operation of the second image pick-up section is started.

Under this constitution, when the first and second housings are folded so that the angle formed by them becomes about 90° in the state where the first image pick-up section is operating, the operation of the first image pick-up section is stopped and the operation of the second image pick-up section is started. Accordingly, it is not necessary to switch the operations of the image pick-up sections by a key operation. Therefore, switching of the operations of the image pick-up sections which are different from each other in camera direction can be quickly performed by a simple operation.

Further, when the position detecting section detects, in a state where the first and second housings are unfolded at an angle of about 90°, further the other housing is turned at an angle of about 90° to the one housing, and the second image pick-up section is operating, that the first and second housings are changing in a direction where they are unfolded, the operation of the second image pick-up section is stopped and the operation of the first image pick-up section is started.

By this constitution, when the operation of unfolding the first and second housings is performed in the state where the second image pick-up section is operating, the operation of the second image pick-up section is stopped and the operation of the first image pick-up section is started. Accordingly, it is not necessary to switch the operations of the image